

R E M A R K S

This is in response to the Office Action that was mailed on April 8, 2005. Minor formal amendments are made to claims 1 and 3. Claim 12 is cancelled, without prejudice to its subject matter, in order to facilitate the prosecution of this application. No new matter is introduced by this Amendment. Claims 1-9 are pending in this application.

Objection was raised to claims 1 and 3. Claims 1 and 3 have been amended as suggested by the Examiner, thereby obviating this ground of objection.

Claims 5 and 12 were rejected on the ground of obviousness-type double patenting over claim 1 of U.S. Patent No. 6,469,198 B2. Office Action, pages 9-10. This ground of rejection is obviated by the enclosed Terminal Disclaimer. The Examiner indicated that claim 12 is a substantial duplicate of claim 5. Claim 12 has been cancelled to obviate this issue.

Claims 1-4 were rejected under 35 U.S.C. §103(a) over US 4,029,683 (Aratani '683). Office Action, pages 3-5. Claims 5, 7-9, and 12 were also rejected under 35 U.S.C. §103(a) over Aratani '683. Office Action, pages 5-7. Claim 6 was rejected under 35 U.S.C. §103(a) over US 4,029,690 (Aratani '690). Office Action, pages 7-8. Each of these grounds of rejection is respectfully traversed.

Each of the present claims relates to an aspect of an invention involving a novel and unobvious catalyst. More particularly, the present invention is based upon discoveries that the nature and position of specific electron-withdrawing substituent groups is significant. That is, the choice of nitro groups, chlorine atoms, and fluorine atoms – and their specific substitution positions on the salicylidene moiety of the catalyst ligand – have significance that is neither taught nor suggested by Aratani (4,029,683 and 4,029,690). The catalyst structures reflected in

the present claims are unexpectedly superior to catalysts having generally similar structures. Incidentally, it is pointed out that with respect to electronegative group substituents, the present claims contemplate only three embodiments! That is, referring to formula (1): when X_1 represents a nitro group, X_2 is a hydrogen atom; when X_1 is chloro, X_2 is chloro; and when X_1 is a hydrogen atom, X_2 is a fluorine atom.

Applicants refer to the 'Declaration of Koji Hagiya under 37 CFR 1.132', which was filed in the parent application. The Examiner's attention is respectfully drawn to the Table on page 5 of the Declaration. As the Examiner will note, with respect to the trans isomer, the optical purity in all of the Comparative Examples is less than 56%, while the optical purity in all of the Examples representative of the present invention is 61% or more. This differential is clearly significant on an industrial scale, where large quantities of materials are produced.

Looking more closely at the data for trans isomers in the Table, it may be seen that the 5-nitro embodiment (Comparative Example 3) was only weakly effective as a catalyst, while the 3-nitro embodiment (Examples 1B and 4B) provided good results. Likewise, the 3-fluoro embodiment (Comparative Example 2) was ineffective, while the 5-fluoro embodiment (Example 3B) provided good results. Examples 2B and 5B demonstrate that the 3,5-dichloro embodiment is very effective, unlike the closely related 3,5-dibromo embodiment of Comparative Example 4.

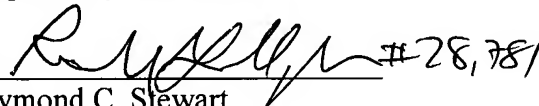
These drastic changes in catalytic activity – these remarkable results – are totally unpredictable based upon the Aratani disclosures. Withdrawal of all of the rejections of record based upon Aratani '683 and Aratani '690 is clearly warranted.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Richard Gallagher (Reg. No. 28,781) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 02-2448, under Order No. 2185-0703P from which the undersigned is authorized to draw.

Dated: July 5, 2005

Respectfully submitted,

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